



Wireless Powered Lab-on-Disc Platform for Measurements on the Spin

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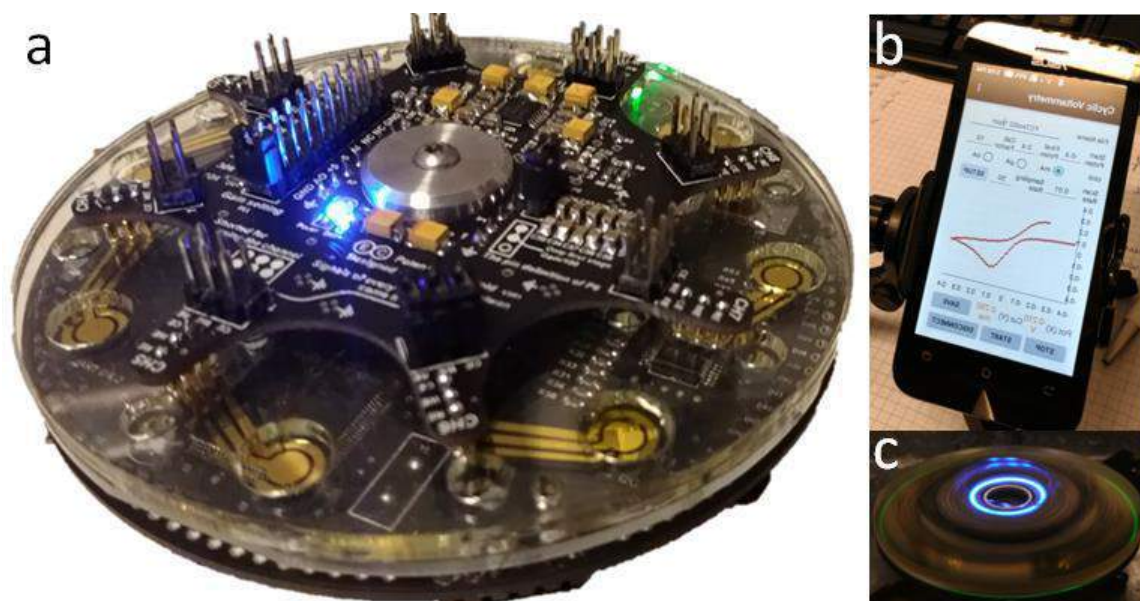
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We integrate Qi wireless power, Arduino microcontroller, Bluetooth signal transmission and lab-on-disc technique for developing a sample-to-answer biosensing platform (Fig. a). The wireless powered lab-on-disc platform (PLoD) connects to an Android smartphone for real-time digital to analog converter (DAC) and analog to digital converter (ADC) control. Furthermore, the PLoD is capable of measuring data while spinning, as shown in Fig. b and c.



The first application of the PLoD is a potentiostat for electrochemical based biosensing [1], we have successfully measure Ferri Ferrocyanides Current-Potential curve while spinning from 0 to 3000 rpm. There are various lab-on-disc applications[2] can be carry out by the PLoD platform for the future stand-alone diagnostics and healthcare systems.

Reference

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